2022

NW Parking District
Parking Assessment and Permit Analysis

Last Updated: 1/10/2023

Prepared for:

PBOT
PORTLAND BUREAU OF TRANSPORTATION

Prepared by:

RWC

RBT CONSULTANTS

PARACHUTE STRATEGIES

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1.0 Executive Summary

1.1. Introduction

This section summarizes the occupancy and utilization data collection effort completed for the on-street parking system within the NW Parking Plan District. Data was collected over two weekdays in October 2022, between the hours of 7:00 AM and 9:00 PM. Data from this study is compared to data from October 2021. The study cataloged hourly license plate data for 3,515 parking stalls over a 14-hour study day as well as applying all permit use (by virtual permit) over the same period.

*A more detailed look at the study findings can be found in **Section 2.0** of this report.*

The 2022 parking utilization study findings reveal a system that is gradually returning to parking behaviors reminiscent of pre-pandemic days. While overall volumes are down comparatively (to 2019), the system has robust levels of activity including some subareas experiencing parking constraints. While findings from the 2022 study are still influenced by the long-term impacts of the pandemic, new or altered patterns of parking behavior have emerged, reflecting a new reality that still requires active management. Going forward, continued application of thoughtful strategies will be required to make the system effectively serve the broad range of user groups that regularly access NW Portland.

1.2. Inventory

- There are **3,515 stalls** within the data collection area (45 fewer than 2021), comprised of 3,484 metered stalls, 11 signed/time-limited stalls, and 20 unrestricted[1] stalls.
- Of the sampled metered stalls, **2,754 stalls** (78%) are designated as metered/or-by-permit (OBP) stalls and **730** (22%) are metered only (where permits are not valid).
- Approximately **92% of all on-street stalls are designated for long-term use** (stays greater than two hours); in this case, 4 Hour parking (3,240 stalls).
- **Only 7%[2] of the on-street parking supply is dedicated to short-term[3] (primarily) commercial use**. These are stalls that are meant for high turnover trips and intended to support adjacent ground floor commercial uses (i.e., businesses).

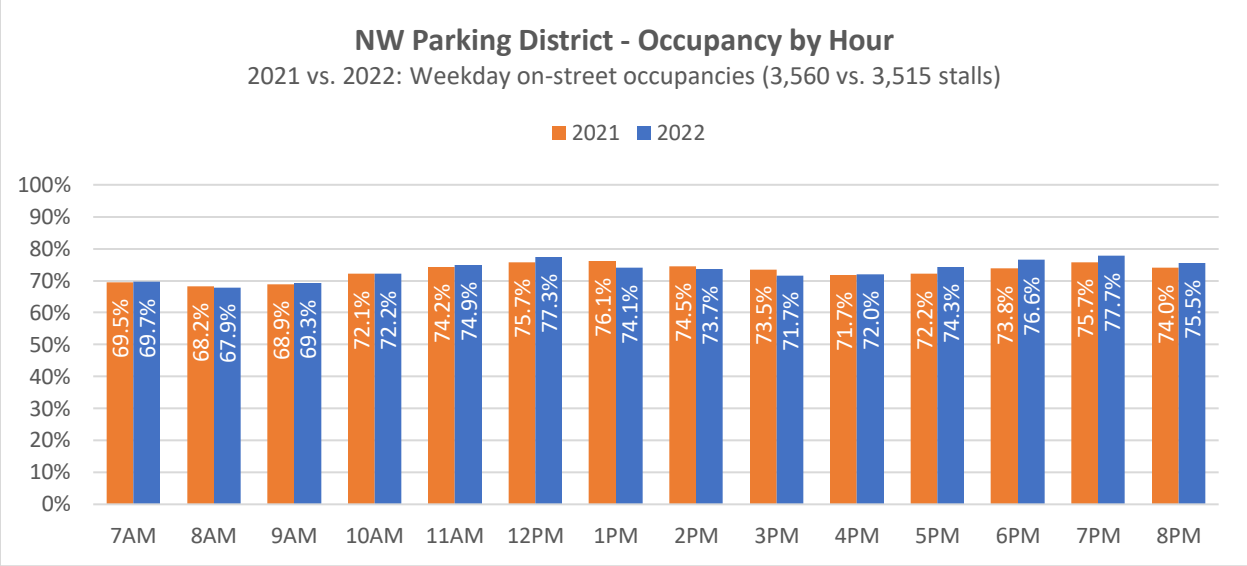
Sample of inventory findings

	2021	2022
Metered only	768 stalls	730 stalls
Metered / OBP	2,754 stalls	2,754 stalls
Signed only	22 stalls	11 stalls
Other	16 stalls	20 stalls
TOTAL	**3,560 stalls**	**3,515 stalls**

[1] Unrestricted stalls are the likely result of temporarily missing or broken signage (due to vandalism).
[2] Excludes 5 Minute, ADA, No Limit stalls.
[3] Stays of two hours or less

1.3. Occupancy

- At the midday peak hour (12:00 PM[4]), the overall occupancy for the entire 3,515-stall study area reached **77%**; this was 1.6 percentage points higher than 2021 (and nearly 3 percentage points higher than 2020).
- **Overall occupancies did not exceed 85% during any hour in 2022**, the same as in 2021. However, three hourly occupancy counts from 2022 exceed the 2021 peak hour occupancy (12:00 PM, 6:00 PM, and 7:00 PM).
- Occupancies in 10 of the 14 hours measured were **higher in 2022** versus 2021. Hourly occupancies in 2022 comparatively averaged **0.5 percentage points higher than 2021** over the 14-hour study.



1.4. Utilization

- The average length of stay over the 14-hour survey (excluding permit users) decreased from 3 hours and 5 minutes (2021) to **2 hours and 52 minutes** (2022), a 7% decrease. This is the third consecutive year showing a decrease (3 hours and 31 minutes in 2020).
- The two largest categories of stall types are 4 Hour metered/OBP stalls, and 4 Hour metered stalls. Occupancies in 4 Hour metered/OBP stalls (2,745 stalls) do not exceed 85% at the peak hour, but did increase from 78% in 2021 to **80%** in 2022. Occupancies in 4 Hour metered stalls (495 stalls) increased from 73.3% in 2021 to **75%** in 2022.
- **Violation rates are highest for 15 Minute and 30 Minute metered stalls**, increasing from 6.7% in 2021 to **28%** in 2022 for 15 Minute stalls (9 stalls) and from 38% in 2021 to 42% in 2022 for 30 Minute stalls (82 stalls).

[4] There is also an evening peak at 7 PM (outside of enforcement hours) with a higher occupancy level, 77.7%.

Sample of utilization findings:

	2021	2022
Peak Occupancy (all stalls)	**76.1%**	**77.7%**
• 4 Hour metered/OBP	78.0%	79.7%
• 4 Hour metered	73.3%	72.3%
Average Length of Stay (excludes permits)	**3:05 hours**	**3:01 hours**
• 4 Hour metered/OBP	3:04 hours	3:16 hours
• 4 Hour metered	2:12 hours	2:37 hours
Violation Rate (all stalls)	**14.8%**	**12.9%**
• 4 Hour metered/OBP	14.0%	11.1%
• 4 Hour metered	12.1%	17.4%

1.5. Other Use Characteristics

- The total number of vehicle trips dipped slightly from 8,598 in 2021 to 8,481[5] in 2022, a decrease of 117 trips.
- The average duration parked at 2 Hour stalls continues to tick downward, now under two hours at 1 hour and 53 minutes compared to 2 hours and 13 minutes in 2021. **Encouragingly, turnover in 2 Hour metered stalls is 5.31 compared to 4.51 in 2021**; 5.00 is the industry minimum target for a designated 2-hour time limit[6].
- **4 Hour metered stalls are operating far more efficiently than the posted time restriction,** maintaining an average duration parked well below 4 hours (1 hour and 54 minutes). This could warrant a discussion with Stakeholder Advisory Committee about reformatting a portion of the 4 Hour stalls to 2 Hour. Occupancy during 2022's peak hour is 74.4% compared to 73.3% in 2021 (63.3% in 2020).
- **For the second straight year non-permit user peak hour trips (i.e., visitors) are up in all stall type categories.**
    - 2 Hour – up 6%
    - 4 Hour – up 14%
    - 4 Hour OBP – up 4%

1.6. Permit Use

- The 2022 peak hour for permit use occurs between **11:00 AM and 12:00 PM when 1,406 permits were present** in the study area. At this hour, a total of 2,524 permit and non-permit vehicles were parked (2 more stalls occupied than 2021). As such, permits represent approximately 55.7% of all vehicles parked, a 6.5 percentage point increase compared to 2021 (49.2%).

[5] Vehicle trips are still lower than pre-pandemic levels (10,701 in 2019).
[6] The minimum turnover rate (by design) for a 2 Hour stall over a 10-hour enforcement day is 5.0 (10 hours / 2 hour duration = 5.0). For example, if the average stay is 1 hour and 45 minutes than the turnover rate would improve to 5.71 (10/1.75 = 5.71).

- Though peak hour occupancies are below 85% overall, **the high volume of permits** (making up greater than 50% of all parked vehicles until 6:00 PM) **is likely driving constraints at the block face level.**
- At the peak hour for permit use (11:00 AM), of the 1,406 active permits in use, **958 were residential and 409 were business permits**. In 2021, 824 residential permits and 376 business permits were present at the peak hour for permit use (922/650 in 2019).
- In 2021, only 2 out of 14 survey hours had more permit users parked on-street than non-permit users. Today (2022), **permits accounted for more than half of occupied parking stalls for 11 of the 14** observed survey hours.

1.7. Permit Assessment

- In 2022 there was a notable increase in the number of total permits distributed (5,693[7]), up 23% from 2021 levels (though still 14% less than 2018). The largest increase came from residential permits, which were up 30% (767 permits) over the previous year. The use of business permits increased by 14% (292 permits) compared to 2021.
- Of the 3,264 residential permit total, 1,557 were income-based permits (47% of the total). In 2021, 1,093 were income-based (42%).
- The actual "peak occupancy" rate for all OBP stalls is 83.6% if the 104 current permits improperly using non-permitted stalls were directed to 4 Hour OBP stalls. This is only the third time OBP stalls have been below 85% since monitoring began (all instances occurring post-COVID).
- Based on current peak hour occupancies, no additional permits would need to be reduced from current allocations to achieve desired occupancies, 84%, in OBP stalls. According to this assessment, an additional 29 could, theoretically, still be allocated while still achieving optimal occupancy levels.

1.8. Summary and Key Recommendations

- 2023 permit allocation target = 5,700
- Shift enforcement hours to target high occupancy periods more effectively, from 9:00 AM – 7:00 PM to 10:00 AM – 8:00 PM
- Preserve and grow the number of short-term (2 Hour) stalls to support ground floor commercial spaces and facilitate higher levels of turnover.
- Minor adjustments to stall formatting
  - ✓ Eliminate 1 Hour Signed stalls (4 total)
  - ✓ Eliminate outlier No Limit stalls (20 total)

[7] Peak year permit allocation was in 2016 when 8,558 permits were issued (4,054 business, 3,412 residential, 1,094 guest).

2.0 Data Findings

The 2022 parking utilization study findings reveal a system that is gradually returning to parking behaviors reminiscent of pre-pandemic days. While overall volumes are down comparatively (to 2019), the system has robust levels of activity including some subareas experiencing parking constraints. While findings from the 2022 study are still influenced by the long-term impacts of the pandemic, new or altered patterns of parking behavior have emerged, reflecting a new reality that still requires active management. Going forward, continued application of thoughtful strategies will be required to make the system effectively serve the broad range of user groups that regularly access NW Portland.

The long-term effect of COVID-19 on our world, our community, and our local transportation systems is still being felt. PBOT has responded by being more accommodating with its on-street parking system by allowing flexibility to adapt to a changing set of priorities. The primary accommodation was in the form of using parking stalls as an area to expand outdoor seating for adjacent businesses.

- Healthy Business permits that allow business owners to use the on-street parking space in front of their establishment for expanded business operations (restaurant seating, etc.); 71 on-street spaces within the study area were affected by the program.

2.1. Background

The following document summarizes a comprehensive occupancy and utilization data collection effort completed for the on-street parking system within the NW Parking Plan District. Data from this study is compared to observations from data collected over the same timeframe in 2021. The data collection methodology was identical for each of the two survey years: including cataloging hourly license plate data for 3,515 parking stalls over a 14-hour study day and applying all permit use (via virtual permit) over the same period. In previous studies all permits were displayed in vehicle windows, as of September 1, 2021, the Zone M parking district moved to virtual permitting where all permit information is stored electronically. As such, permit information (e.g., residential, business, daily guest) was added after the data was collected.

2.2. Process and Study Area

The data collection study boundary was defined by PBOT and the NW Stakeholder Advisory Committee (see **Figure A**). Due to the large study area, data collection was conducted over two days. Dates selected for data collection and analysis were:

2022 Data Collection

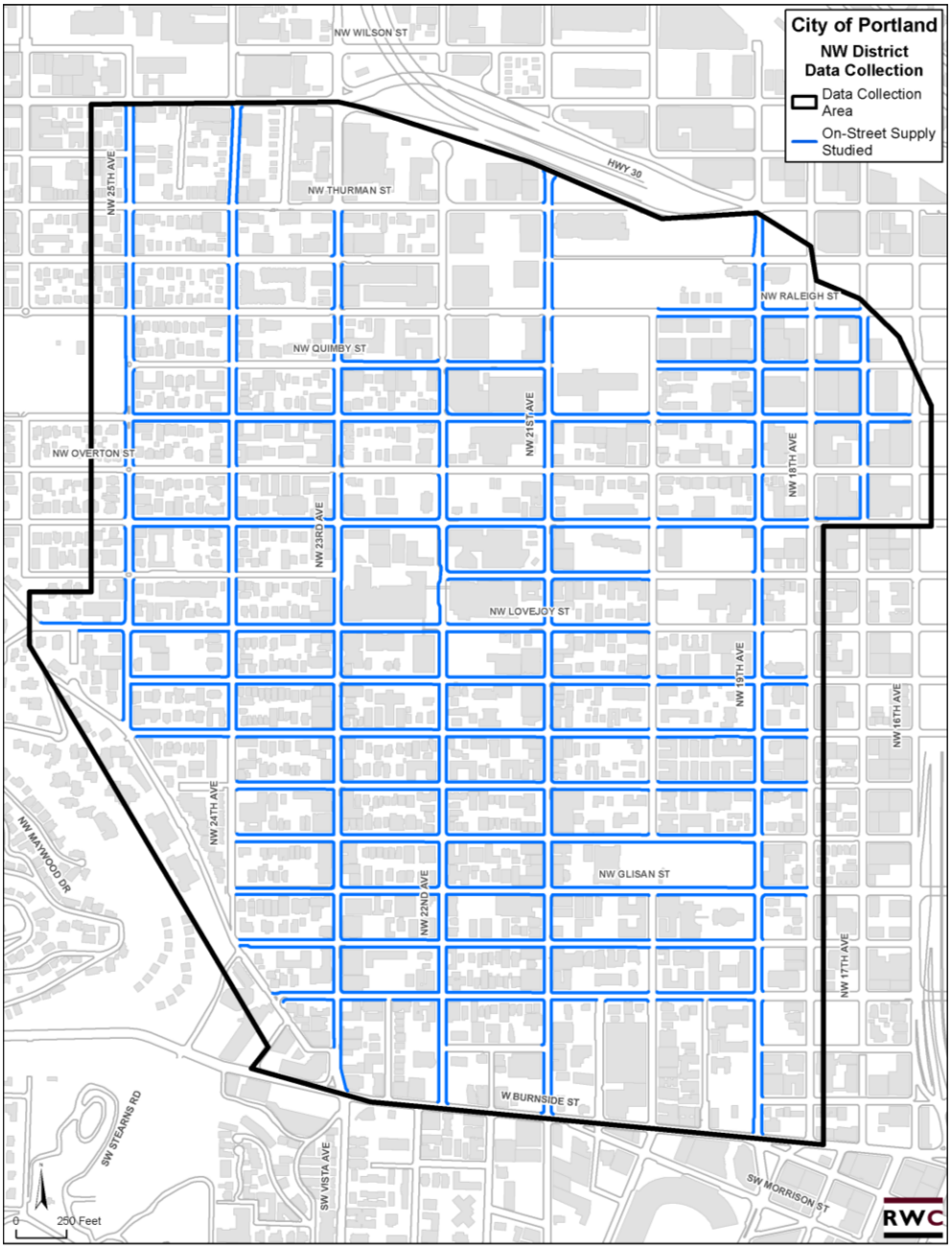
- Tuesday, October 11, 2022
- Tuesday, October 18, 2022

2021 Data Collection

- Tuesday, October 5, 2021
- Tuesday, October 12, 2021

As shown in **Figure A,** the 324-block face study area was bounded by NW Vaughn Street (north), W Burnside Street (south), NW 25th and NW 26th Avenues (west), and NW 16th, NW 17th, and NW 18th Avenues (east). This boundary is consistent with previous study years.

Figure A: Project Study Area



3.0 Inventory

Year-over-year changes to the study area's parking inventory were minimal. By contrast, more significant formatting changes were made between the 2019 and 2020 surveys. **Table 1** provides a detailed breakout of the complete inventory of parking sampled[8].

- As stated above, and given the more semi-permanent nature of Healthy Business permits, these on-street stalls (71) were excluded from the 2022 parking inventory. This affects overall parking occupancy calculations and occupancies by block face.
- There are **3,515 stalls** within the data collection area (45 fewer than 2021), comprised of 3,484 metered stalls, 11 signed/time-limited stalls, and 20 unrestricted[9] stalls.
- Of the metered stalls, **2,754 stalls** (78%) are designated as metered/OBP stalls (5 15 Minute, 2,745 4 Hour, and 4 ADA stalls). The remaining 730 (22%) metered-only stalls consist of 15 Minute (9 stalls), 30 Minute (82 stalls), 2 Hour (148 stalls), 4 Hour (495 stalls), and ADA (1 stall).
- There are 7 "Fast Stop" zones (5 Minute parking) for quick pickups and drop-offs, primarily located in dense commercial areas; that number is down from 14 stalls[10] in 2021.
- Of the other 4 signed/time-limited stalls, all are designated as 1 Hour.

5-minute Fast Stop zone

- Approximately **92% of all on-street stalls are designated for long-term use** (stays greater than two hours); in this case, 4 Hour parking (3,240 stalls). Of this total, 2,745 metered stalls allow use of permits and 495 stalls are metered exclusively for up to a 4-hour stay (no permits allowed).
- **Only 7%[11] of the on-street parking supply is dedicated to short-term[12]** (primarily) **commercial use**. These are stalls that are meant for high turnover trips and intended to support adjacent ground floor commercial uses (i.e., businesses). While 4 Hour metered only stalls can also serve the short-term customer, they do not have an induced turnover element that recirculates users like 2 Hour stalls do.

[8] RWC completed a parking inventory of the entire NW Parking District in October 2020. During that inventory, a total of 5,409 stalls were cataloged throughout the district. A full breakout of those inventory findings can be found in **Appendix A**.
[9] Unrestricted stalls are the likely result of temporarily missing or broken signage (due to vandalism).
[10] It is possible that all 5 Minute stalls (in 2021) were mistakenly categorized as "Fast Stop" stalls, when several of them did not have the "Fast Stop" special designation.
[11] Excludes 5 Minute, ADA, No Limit stalls.
[12] Stays of two hours or less

Table 1: Inventory Summary 2022 vs. 2021

Stall Type	All		Metered		Signed		Metered Only	Metered OBP
	Stalls	% Total	Stalls	% Total	Stalls	% Total	Stalls	Stalls
On-Street	3,515	100.0%	3,484	99.1%	11	< 1%	730	2,754
	3,560	100.0%	3,522	98.9%	22	< 1%	768	2,754
5 Minute	7	< 1%	-	-	7	< 1%	-	-
	14	< 1%	-	-	14	< 1%	-	-
15 Minute	9	< 1%	9	< 1%	-	-	4	5
	7	< 1%	4	< 1%	3	< 1%	4	-
30 Minute	82	2.3%	82	2.3%	-	-	82	-
	85	2.4%	85	2.4%	-	-	85	-
1 Hour	4	< 1%	-	-	4	< 1%	-	-
	5	< 1%	-	-	5	< 1%	-	-
2 Hour	148	4.2%	148	4.2%	-	-	148	-
	145	4.1%	145	4.1%	-	-	145	-
4 Hour	3,240	92.2%	3,240	92.2%	-	-	495	2,745
	3,283	92.2%	3,283	92.2%	-	-	533	2,750
ADA[13]	5	< 1%	5	< 1%	-	-	1	4
	5	< 1%	5	< 1%	-	-	1	4
No Limit[14]	20	< 1%	-	-	-	-	-	-
	16	< 1%	-	-	-	-	-	-

[13] ADA accessible stalls were designated at 2 Hour (1 metered stall) and 4 Hour (4 metered/OBP stalls) time-restricted spaces.
[14] No Limit stalls are considered unrestricted and not signed nor metered.

4.0 Occupancy & Utilization - Weekday Comparative Analysis

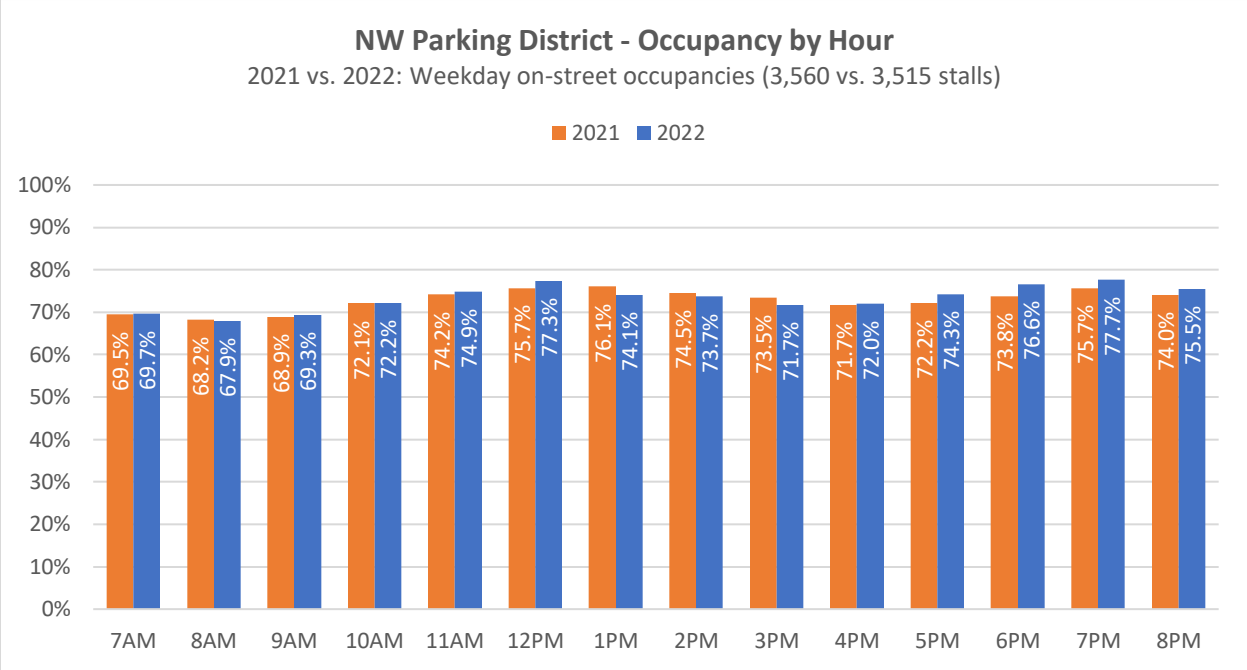
4.1. Overview

The following analysis presents a comparative analysis of 2022 vs. 2021 operations on weekdays within the study area. License plate data was collected hourly over a 14-hour span between 7:00 AM and 9:00 PM. This was intended to account for the two hours before and after hours of parking enforcement (9:00 AM to 7:00 PM).

4.2. Occupancy

Figure B identifies differences in hourly parking occupancies between the two study years.

Figure B: Weekday Hourly Occupancies (2022 vs. 2021)



- Occupancies in 10 of the 14 hours measured were **higher in 2022** versus 2021.
- At the midday peak hour (12:00 PM), the overall occupancy for the entire 3,515-stall study area reached **77.3%**; this was 1.6 percentage points higher than 2021 (and nearly 3 percentage points higher than 2020).
- Hourly occupancies in 2022 comparatively averaged **0.5 percentage points higher than 2021** over the 14-hour study.
- **Overall occupancies did not exceed 85% during any hour in 2022,** the same as in 2021. However, three hourly occupancy counts from 2022 exceed the 2021 peak hour occupancy (12:00 PM, 6:00 PM, and 7:00 PM).

- With a midday peak hour occupancy rate of 77.3%, **4 in every 9 block faces in the study area are constrained** (exceed 85%) in 2022. In addition, nearly 2 out of every 3 block faces have occupancies that exceed 70%.
- Of the remaining block faces, approximately 1 in 5 show efficient use and 1 in 3 show moderate to low use during the peak hour (see graphic, right).
- Overall occupancies throughout the study area are considered to be at ideal levels, characterized as "Efficient Supply" (see graphic).

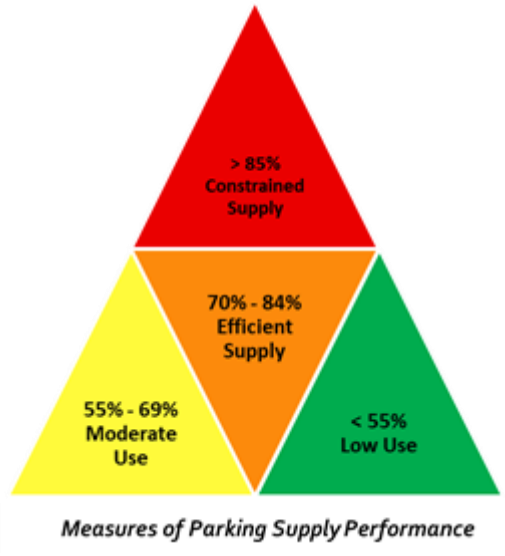


Figure C provides a block-face level "heat map" of the 2022 weekday peak hour (12:00 – 1:00 PM) showing color-coded parking occupancies for the entire sampled study area. As the figure shows, block faces that are constrained during the peak hour are more prevalent in the district south of NW Lovejoy Street.

Figure D provides an illustration that identifies the percentage point difference in peak hour parking occupancies between the two study years by block face. The darker colors (both red and blue) indicate higher levels of occupancy change, whereas lighter colored block faces indicate lower levels of change (yellow, indicating no change).

Figure C: Weekday Peak Hour Occupancy Map (2022)

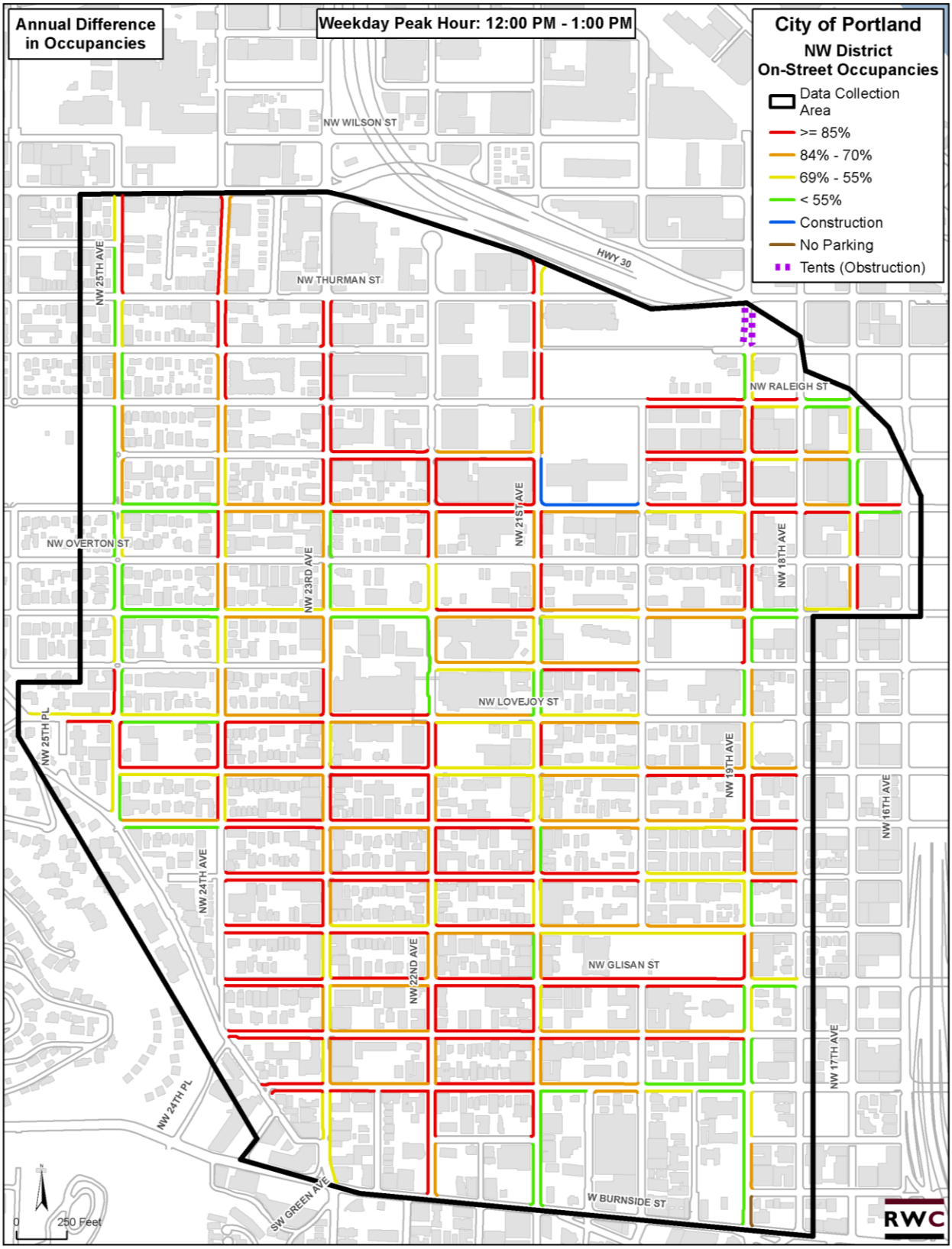
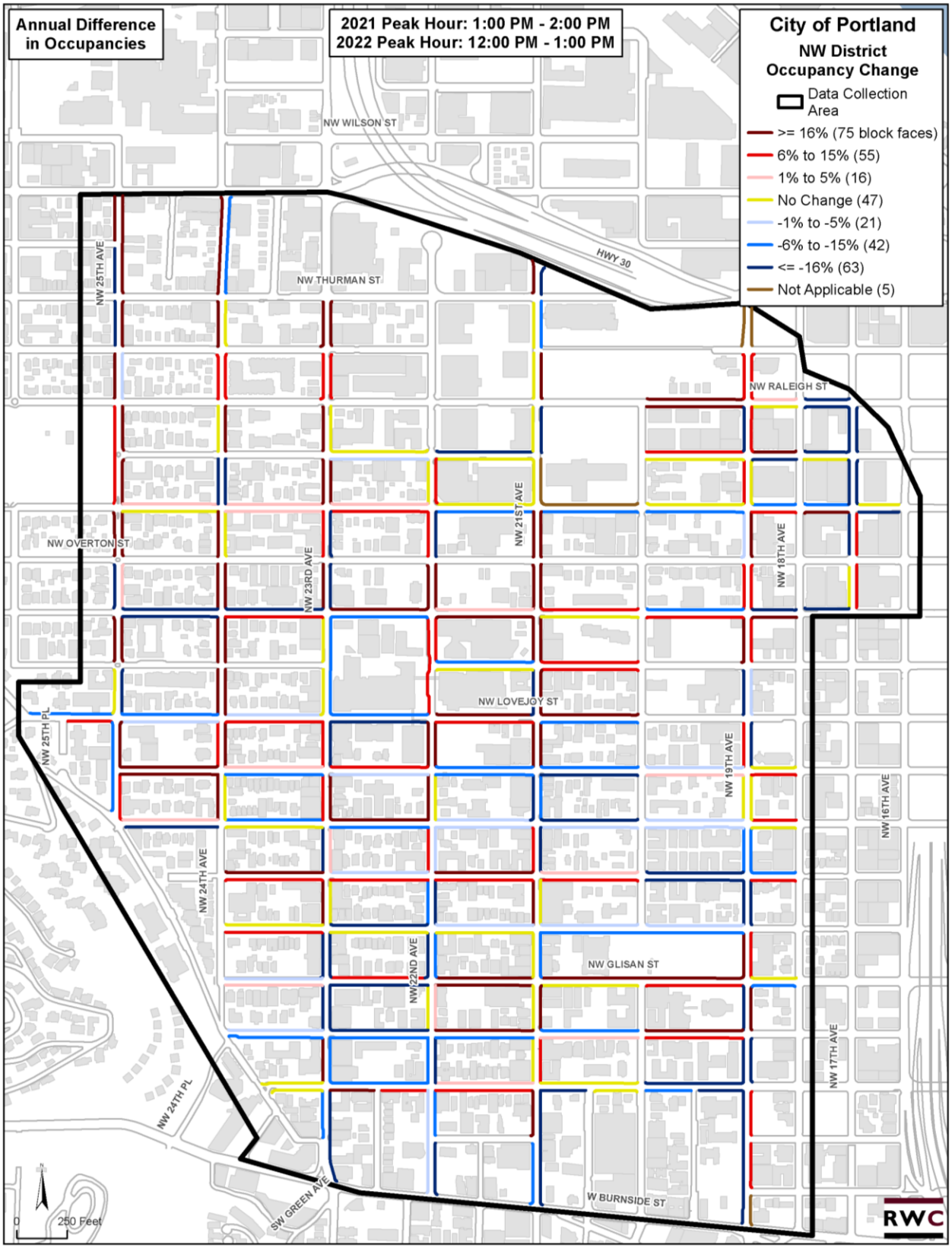


Figure D: Differences in Peak Hour Occupancy – Comparison of 2022 vs. 2021



As **Figure D** demonstrates, hourly occupancies are slightly higher across the board when comparing 2022 data to 2021 figures. Conversely, there are a number of small pockets (and individual block faces) that show notable decreases compared to the previous year.

- At the peak hour (12:00 PM), of the 324 analyzed block faces, 146 of them (45%) show an increase over 2021 (124 block faces in 2021).
- 126 block faces (39%), show a decrease over 2021 (compared to 113 block faces in 2021).
- Approximately 15% of the surveyed block faces (47) show no change (82 in 2021).
- Five block faces are noted as Not Applicable (i.e., unable to be compared with the previous year), which are primarily due to construction or a temporary closure during one of the two data collection periods.
- Pockets of *occupancy increases* include:
    - NW Pettygrove from 22nd to 25th
    - NW 24th from Kearney to Pettygrove
    - NW Irving from 20st to 24th
    - NW 23rd from Pettygrove to Thurman
    - NW 21st from Kearney to Pettygrove
- Pockets of *occupancy decreases* include:
    - NW Flanders from 21st to 24th
    - NW 23rd from Burnside to Hoyt (with minor exceptions)
    - NW Kearney from 20th to 22nd
    - NW Flanders from 22nd to 24th
    - The intersection at NW 21st and Johnson (7 of the 8 block faces show a decline)

4.3. Utilization

Table 2 provides a breakout of key utilization metrics by stall type. These include peak hour, peak occupancy, empty stalls, average length of stay, and violation rate. Comparative results between 2022 and 2021 are provided.

- The average length of stay over the 14-hour survey (excluding permit users) decreased to **2 hours and 52 minutes** (2022) from 3 hours and 5 minutes (2021), a 7% decrease. This is the second consecutive year showing a decrease (3 hours and 31 minutes in 2020).
- **Overall violation[15] rates decreased** from 14.8% (2021) to a combined 12.9% for all surveyed stalls (2022). This is higher than industry best practice standards[16] for effective enforcement. Similarly, this is the third straight year of decline in the violation rate (16.4% in 2020).

[15] Vehicles observed parking longer than the posted time restriction. In NW users are lawfully allowed to extend their parking session at 4 Hour meters by adding time; consequently, these figures might overstate the true violation rate.
[16] The industry would target a violation rate between 5% and 9%.

- The two largest categories of stall types are 4 Hour metered/OBP stalls, and 4 Hour metered stalls. Occupancies in 4 Hour metered/OBP stalls (2,745 stalls) do not exceed 85% at the peak hour, increasing to **79.8%** in 2022 from 78.0% in 2021. Occupancies in 4 Hour metered stalls (495 stalls) increased to **74.6%** in 2022 from 73.3% in 2021.
- **Violation rates are highest for 15 Minute and 30 Minute metered stalls,** increasing to **28.0%** in 2022 from 6.7% in 2021 for 15 Minute stalls (9 stalls) and to 42.1% in 2022 from 38.0% in 2021 for 30 Minute stalls (82 stalls).
- **Average duration parked at 4 Hour Metered stalls is 1 hour and 54 minutes,** which suggests a portion of those stalls could be reassigned as 2 Hour Metered stalls while not negatively impacting the average user.

Table 2: Weekday Utilization by Time Stay (2022 vs. 2021) [17]

Stall Type	Stalls	Peak Hour	Peak Occupancy	Stalls Available	Average Duration[18]	Violation Rate[19]
On-Street Supply Studied	**3,515** **3,560**	**12:00 PM – 1:00 PM** **1:00 PM – 2:00 PM**	**77.3%** **76.1%**	**798** **814**	**2:52 hours** **3:05 hours**	**12.9%** **14.8%**
5 Minutes Signed	**7** **14**	**12:00 PM – 2:00 PM** **2:00 PM – 3:00 PM**	**57.1%** **61.5%**	**3** **5**	**-** **-**	**4.2%** **12.5%**
15 Minutes Metered	**9** **4**	**multiple** **11:00 AM – 12:00 PM**	**77.8%** **100.0%**	**2** **-**	**-** **-**	**28.0%** **6.7%**
15 Minutes Signed	**-** **3**	**-** **multiple**	**-** **100.0%**	**-** **-**	**-** **-**	**-** **18.2%**
30 Minutes Metered	**82** **85**	**7:00 PM – 8:00 PM** **7:00 PM – 8:00 PM**	**61.2%** **64.3%**	**33** **30**	**-** **-**	**42.1%** **38.0%**
1 Hour Signed	**4** **5**	**-** **7:00 AM – 9:00 AM**	**0.0%** **100.0%**	**4** **-**	**-** **4:00 hours**	**-** **55.6%**
2 Hours Metered	**148** **145**	**6:00 PM – 7:00 PM** **6:00 PM – 7:00 PM**	**73.7%** **74.0%**	**40** **38**	**1:53 hours** **2:13 hours**	**24.3%** **22.5%**
4 Hours Metered/OBP	**2,745** **2,750**	**7:00 PM – 8:00 PM** **12:00 PM – 2:00 PM**	**79.8%** **78.0%**	**547** **589**	**2:54 hours** **3:04 hours**	**11.1%** **14.0%**
4 Hours Metered	**495** **533**	**multiple** **1:00 PM – 2:00 PM**	**74.6%** **73.3%**	**129** **120**	**1:54 hours** **2:12 hours**	**12.2%** **12.1%**
ADA[20]	**5** **5**	**multiple** **multiple**	**60.0%** **60.0%**	**2** **2**	**3:40 hours** **4:00 hours**	**66.7%** **33.3%**

[17] Note that the stall totals for 2022 are based on the stall totals at the midday hour of 12:00 PM. When individual stall types peak at hours other than the 12:00 PM hour, the displayed stalls available might not correlate to the respective stall totals given in the table. This is due to the fluctuating inventory supply total. After enforcement ends for spaces, such as loading zones, the inventory grows.

[18] Average duration is filtered to show non-permit users only (ADA accessible and No Limit exempt) during 9:00 AM to 7:00 PM enforcement hours (No Limit and Total Supply exempt).

[19] Violation rates at long-term meters (greater than 2 hours) may be lower than reported due to the ability of users to 'plug the meter' (add additional time beyond the posted time restriction).

[20] ADA accessible stalls are designated at 2-hour (1 metered stall) and 4-hour (4 metered/OBP stalls) time-stay spaces.

Stall Type	Stalls	Peak Hour	Peak Occupancy	Stalls Available	Average Duration[18]	Violation Rate[19]
No Limit	20	1:00 PM – 2:00 PM	90.0%	2	4:07 hours	-
	16	multiple	87.5%	2	3:14 hours	-

4.4. Other Use Characteristics

Table 3 provides a summary of additional key metrics by type of user (all, non-permit, and permit) across several utilization metrics.

- Length of stay has decreased somewhat over 2021 levels, dropping from 3 hours and 5 minutes to 2 hours and 52 minutes for non-permit users. Length of stay has also decreased for permit users, dropping from 6 hours and 46 minutes (2021) to 6 hours and 19 minutes (2022).
- The total number of (all day) vehicle trips dipped slightly from 8,598 in 2021 to 8,481[21] in 2022, a decrease of 117 trips (1.4%).

  It should be a stated goal to maintain and/or increase the number of **non-permit user trips** coming to NW. These trips **are down 817 compared to 2021**. Conversely, **permit user trips were up by nearly 700, potentially displacing available access for visitors**.
- The average rate of turnover for non-permit users increased from 3.24 in 2021 to **3.49 in 2022** (4.27 in 2019).
- The slight uptick in parking occupancies was also reflected in the increased number of active **on-street permits during the peak hour for permit use**. Aggregated, the increase is about 14%: 1,424 peak hour permits in 2022 compared to 1,248 in 2021. Observed residential and business permits counts were up in both categories. **Table 5** provides a detailed account of all the permit types in use during the survey periods.
- Approximately **one in 11 vehicles parked more than once within the study area** (9.1%) during the study period, accounting for a total of 775 trips. This was one percentage point lower than 2021 when 867 "reparks" occurred (10.1% of vehicle trips[22]).

Note: Non-permit user trips are effectively discretionary "customer" trips and should be considered a bellwether for economic activity in the neighborhood. The purpose of parking management is to ensure, to the highest degree possible, the availability of, and access to, on-street parking for the customer and visitor (as well as the resident). If the consequence of more rigorous management strategies results in fewer customer trips, the strategies should likely be reevaluated.

[21] Vehicle trips are still lower than pre-pandemic levels (10,701 in 2019).
[22] 2019 = 489 vehicles re-parked, representing 6.5% of all vehicle trips.

Table 3: Other Weekday Use Characteristics (2022 vs. 2021)

Use Characteristics[23]	All Users	Non-Permit Users	Permit Users
Average Duration	4:05 hours 4:04 hours	2:52 hours 3:05 hours	6:19 hours 6:46 hours
Vehicle Trips	8,481 8,598	5,497 6,314	2,984 2,285
Turnover Rate	2.45 2.46	3.49 3.24	1.58 1.48
Permits in Metered 4 Hour OBP (peak hour for permit use)	- -	- -	1,299 1,157
Permits observed in all other stall types[24]	- -	- -	125 91
Total permits displayed (peak hour for permit use)	- -	- -	1,424 1,248
Vehicles moving between stalls: re-parking (% of vehicle trips)	775 (9.1%) 867 (10.1%)	- -	- -

Table 4 provides a summary of key metrics only for stalls that allow a 2- or 4-hour time limit (metered and by permit). These include occupancy at peak hour, user group, vehicle trips, vehicle hours parked, average length of stay, and turnover rate.

- 2 Hour metered stall occupancy experienced a second year of consecutive increases, now at 69.1% occupancy during the peak hour compared to 65.5% in 2021, and 50.7% in 2020.
- The average duration at 2 Hour stalls continues to tick downward, now under two hours at 1 hour and 53 minutes compared to 2 hours and 13 minutes in 2021. **Encouragingly, turnover in 2 Hour metered stalls is 5.31 compared to 4.51 in 2021**; 5.00 is the industry minimum target for a designated 2-hour time limit[25].
- **4 Hour metered stalls are operating far more efficiently than the posted time restriction,** maintaining an average duration parked well below 4 hours (1 hour and 54 minutes). This could warrant a discussion with Stakeholder Advisory Committee about reformatting a portion of the 4 Hour stalls to 2 Hour. Occupancy during 2022's peak hour is 74.4% compared to 73.3% in 2021 (63.3% in 2020).
- 2,157 parked vehicles were observed at the peak hour in 4 Hour metered/OBP stalls (79.8% occupied). Of this total, **45% were non-permit users** (975 vehicles), up from 942 vehicles in 2020 (729 in 2020).

[23] Peak hours for permit use observations for 2022 and 2021 are 7:00 AM to 8:00 AM and 12:00 PM to 1:00 PM, respectively.
[24] Ideally no vehicles displaying permits would be parked in these stall types (ADA exempt); they are not intended for permit holders.
[25] The minimum turnover rate (by design) for a 2 Hour stall over a 10-hour enforcement day is 5.0 (10 hours / 2 hour duration = 5.0). For example, if the average stay is 1 hour and 45 minutes than the turnover rate would improve to 5.71 (10/1.75 = 5.71). The higher the turnover rate, the more efficient the system is in allowing access to a greater number of visitors.

- **For the second straight year non-permit user peak hour trips (i.e., visitors) are up in all stall type categories.**
    - 2 Hour – up 6%
    - 4 Hour – up 14%
    - 4 Hour OBP – up 4%

Table 4: On-Street Permit Parking Utilization by User Group at Peak Hour (2022 vs. 2021)

Use Type	Stalls	Occupancy at Peak Hour[26]	User Group[27]	Users[28]	Average Duration[29]	Turnover Rate
2 Hours Metered	148 145	69.1% 65.5%	All	105 91	2:15 hours 2:14 hours	4.43 4.48
			Non-Permit	84 79	1:53 hours 2:13 hours	5.31 4.51
			Permits	21 12	7:37 hours 4:30 hours	1.31 2.22
4 Hours Metered/OBP	2,745 2,750	79.8% 78.0%	All	2,157 2,091	4:08 hours 4:10 hours	2.42 2.40
			Non-Permit	975 942	2:54 hours 3:04 hours	3.45 3.25
			Permits	1,182 1,149	5:35 hours 5:54 hours	1.79 1.70
4 Hours Metered	495 533	74.4% 73.3%	All	374 330	2:18 hours 2:12 hours	4.36 4.53
			Non-Permit	299 263	1:54 hours 2:12 hours	5.26 4.54
			Permits	75 67	7:52 hours 3:00 hours	1.27 3.33

[26] Occupancies during the respective survey years' peak hour.
[27] Number of permit users includes permits used incorrectly.
[28] Number of users during the respective survey years' peak hour.
[29] Average duration of stay is filtered to show each stall type only when it is enforced (9:00 AM to 7:00 PM).

4.5. Permit Usage

Table 5 illustrates permit activity by hour of the day.

- The 2022 peak hour for permit use occurs between **11:00 AM and 12:00 PM when 1,406 permits were present** in the study area. At this hour, a total of 2,524 permit and non-permit vehicles were parked (2 more stalls occupied than 2021). As such, permits represent approximately 55.7% of all vehicles parked, a 6.5 percentage point increase compared to 2021 (49.2%).
- Though peak hour occupancies are below 85% overall, **the high volume of permits** (making up greater than 50% of all parked vehicles until 6:00 PM) **is likely driving constraints at the block face level.**
- **The overall peak hour for total vehicles parked occurs at 7:00 PM**, when 2,714 parked vehicles were observed; 74 more vehicles parked compared to 2021 (during the same hour). At this hour, enforcement and use restrictions end for various stalls (i.e., loading zones), this creates a larger on-street supply with more available stalls.
- At the peak hour for permit use (11:00 AM), of the 1,406 active permits in use, **958 were residential and 409 were business permits**. In 2021, 824 residential permits and 376 business permits were present at the peak hour for permit use (922/650 in 2019).
- In 2021, only 2 out of 14 survey hours had more permit users parked on-street than non-permit users. Today (2022), **permits accounted for more than half of occupied parking stalls for 11 of the 14 observed survey hours.**
- With the adoption of virtual permitting, the number of Temporary (scratch off) permits in use has plummeted, previously averaging 188 permits per hour (2020), now down to approximately 25 per hour (2022).

Table 5: Weekday Permit Use (2022 vs. 2021)

Permit Type Displayed	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM
ADA	4 4	4 5	4 8	3 10	3 7	4 7	2 6
Temporary	26 24	24 28	26 27	27 27	28 29	24 24	26 26
Resident	1,251 1,015	1,125 925	1,021 864	971 838	958 824	939 818	911 812
Business	134 133	215 189	284 268	373 340	409 376	420 392	426 390
Public[30]	2 3	1 3	1 3	3 3	2 3	8 5	6 5
Total permits	1,424 1,182	1,375 1,153	1,343 1,173	1,384 1,221	1,406 1,241	1,401 1,248	1,378 1,240
Stalls occupied	2,343 2,361	2,282 2,316	2,331 2,336	2,432 2,447	2,524 2,522	2,615 2,573	2,504 2,585
% of occupied stalls	60.8% 50.1%	60.3% 49.8%	57.6% 50.2%	56.9% 49.9%	55.7% 49.2%	53.6% 48.5%	55.0% 48.0%
Permit Type Displayed	**2:00 PM**	**3:00 PM**	**4:00 PM**	**5:00 PM**	**6:00 PM**	**7:00 PM**	**8:00 PM**
ADA	2 9	1 6	1 6	2 6	2 3	3 3	2 3
Temporary	26 26	28 21	23 20	22 20	24 20	26 19	25 19
Resident	906 822	911 827	958 835	1,055 898	1,091 938	1,116 976	1,129 998
Business	420 386	409 372	376 337	270 248	198 143	151 100	119 89
Public	4 3	2 1	1 1	3 0	2 0	1 0	1 0
Total permits	1,364 1,247	1,356 1,228	1,364 1,199	1,357 1,172	1,322 1,104	1,302 1,100	1,282 1,111
Stalls occupied	2,502 2,543	2,433 2,510	2,459 2,470	2,565 2,489	2,673 2,574	2,714 2,640	2,637 2,580
% of occupied stalls	54.5% 49.0%	55.7% 48.9%	55.5% 48.5%	52.9% 47.1%	49.5% 42.9%	48.0% 41.7%	48.6% 43.1%

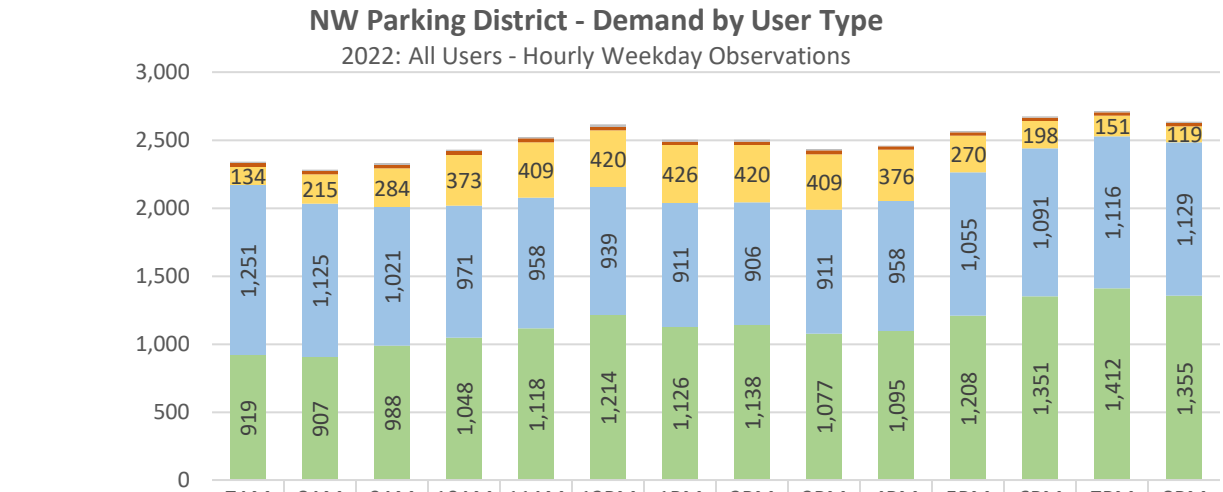
Figure E illustrates the hourly distribution of all user types (non-permit/permit) over the course of the 2022 study.

- **The primary permit type in use at any hour is a residential permit**. The peak hour for use of a residential permit on the survey day was at 7:00 AM, when 1,251 were present (1,015 in 2021).

[30] Not a true "permit." Includes city/government vehicles. Typically license plates with an "E" at the beginning.

- The peak hour for **business permits** is at 1:00 PM, when 426 are displayed (392 in 2021), a 9% increase over the previous year.
- As stated earlier, the switch to virtual permits has significantly reduced the number of Temporary permits in circulation when compared to 2020 (previously as high as 203, now only 28). In the last two years the number of temporary permits have normalized, hovering around an average of 25 present per hour within the sampled data.

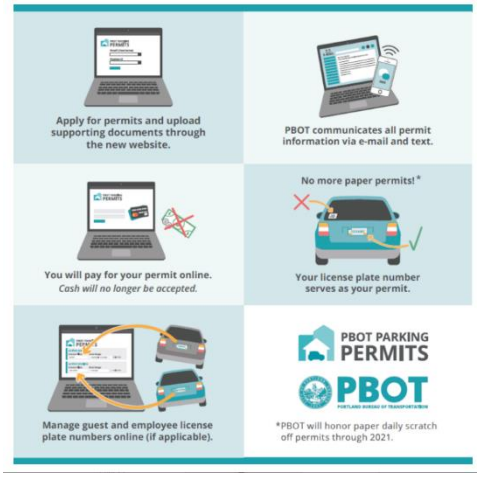
Figure E: Weekday Hourly Demand by User Type (2022)



	7AM	8AM	9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
Other Permits	13	11	11	12	11	18	15	12	8	7	10	9	9	9
Temporary	26	24	26	27	28	24	26	26	28	23	22	24	26	25
Business	134	215	284	373	409	420	426	420	409	376	270	198	151	119
Residential	1251	1125	1021	971	958	939	911	906	911	958	1055	1091	1116	1129
Non-permit Users	919	907	988	1048	1118	1214	1126	1138	1077	1095	1208	1351	1412	1355
Total	2343	2282	2331	2432	2524	2615	2504	2502	2433	2459	2565	2673	2714	2637

This chart provides a good visual account of which user group, at what time of day, is occupying the on-street parking supply. The data also suggests that shifting the enforcement hours from the current 9:00 AM – 7:00 PM window to 10:00 AM – 8:00 PM could generate some additional "non-permit user" turnover at a time when their presence is its highest (1,412 non-permit users during the 7:00 PM hour). Also, delaying enforcement later in the morning would have minimal effect on existing users, only 60 additional non-permit users are present between 9:00 – 10:00 AM, which is the only user group controlled by enforcement hours. Furthermore, delaying morning enforcement is also consistent with Vision Zero best practices, like encouraging evening visitors to use a private-for-hire (e.g., Lyft, Uber, taxi) to get home and come back in the morning for their vehicles without the worry of receiving a citation.

5.0 Permit Assessment



All users apply and receive their permits (e.g., residential, business, and temporary) through the city's electronic portal. All applications still go through a validation process, but rather than receiving a new paper permit, all permits are tied to each user's license plate. Employers can manage their permit allotment by "checking out" business permits to their employees based on their shift regimen. In other words, two employees can use (i.e., "check out") the same business permit as long as they are not parked in Zone M at the same time.

5.1. Permit Allocation

The purpose of this assessment is to establish a measured breakout of the current supply, tracking where permit users are parking, by type of stall, and using that information to extrapolate the findings to the entire inventory. A complete inventory update of the NW Parking District was conducted in 2022 (see **Appendix A**). **Table 6** provides an accounting of the number of permits the city allocated by type of permit within the NW Parking District at the time of the survey.

The increase in number of residential permits between 2021 and 2022 may be less than it appears due to change in how the number of permits is reported. For 2022, used the number of active annual permits on the survey date (issued up to 1 year before before). In previous years, number of permits was only permits issued from the start of the permit cycle in September through the survey date.

This change in how permits are reported was made since residential permits are now issued with a rolling expiration date instead of a fixed permit cycle used in the previous physical permit system. Business permits continue to be issued on a fixed permit cycle ending on Aug 31.

- In 2022 there was a notable increase in the total number of permits distributed (5,693[31]), up 23% from 2021 levels (though still 14% less than 2018) – *see orange inset*. The largest increase came from residential permits, which were up 30% (767 permits) over the previous year. The use of business permits increased by 14% (292 permits) compared to 2021.
- Of the 3,264 residential permit total, 1,557 were income-based permits (47% of the total). In 2021, 1,093 were income-based (42%).

Table 6: Permit Allocations Comparison (2021 vs. 2022)

Year	2021	2022	Change
Business	2,137	2,429	13.7%
Resident	2,497	3,264	30.7%
Total Allocated	**4,634**	**5,693**	**22.9%**

[31] Peak year permit allocation was in 2016 when 8,558 permits were issued (4,054 business, 3,412 residential, 1,094 guest).

5.2. Permit Use and Extrapolation Analysis

Table 7 provides the format for estimating current use of permits in the district. The format is based on 2022 findings extrapolated to a larger NW Parking District supply area totaling 5,268[32] stalls.

Table 7: 2022 Summary of Permit Use

		A	B	C	D
	Observation	**Sample Size**	**Percent of Sample**	**All Stalls**	**2021 Comparison**
1	On-street stalls in all NW Parking District	-	-	5,268	5,409
2	On-street stalls surveyed – sample size	3,515	100%	-	3,560
3	Stalls Metered 4 Hour OBP	2,754	78%	4,306	2,750
4	Stalls where permits are not valid (Stalls without an OBP designation)	761	22%	962	790
	Extrapolation Analysis[33]				
5	Permits in Metered 4 Hour OBP - peak hour	1,255	46%	1,962	1,812
6	Permits observed in all other stall types[34]	104	14%	131	116
7	Permits displayed during peak hour and extrapolated to all on-street stalls	1,359	N/A	2,094	1,928

- There are 4,306 stalls within the entire inventory of stalls where parking with a permit is allowed (row 3, column C). This represents about 78% of all parking in the district. The remaining 962 stalls (22%) do not allow parking with a permit (row 4, column C).[35]
- 2022 findings indicate there are 1,359 permits displayed (up 9% compared to 2021) in the sampled supply during the peak hour for permit use (row 7, column A). Of this total, 1,255 are parked in 4 Hour OBP Metered stalls (row 5, column A).
- An additional 104 permits (up 17% compared to 2021) were found to be parked in other stall types, where permits are not allowed (row 6, column A). Though it is lawful for permit users to park in metered-only stalls with valid payment.

[32] RWC completed a parking inventory of the entire NW Parking District in September 2022. During that inventory, a total of 5,268 stalls were cataloged throughout the district. A full breakout of those inventory findings can be found in **Appendix A**.
[33] Peak hour observations focus solely on the 12:00 PM peak hour for permit use instead of the 1:00 PM peak hour for occupancy.
[34] Ideally no vehicles displaying permits would be parked in these stall types; they are not intended to accommodate permit holders without proper meter payment. At the time of the inventory (fall 2020), there were 75 signed or by permit (OBP) stalls that make up the remaining inventory of OBP stalls.
[35] ADA spaces are exempt.

- When these 1,359 permits are extrapolated to the entire parking supply where permits are allowed (OBP stalls only), there are 2,094 permits displayed during the peak hour on a "typical day" (row 7, column C).

5.3. Recommendations

Traditionally, **Table 8** summarizes the number of Business and Residential permits that would be allocated to lower occupancies in 4 Hour OBP stalls to achieve the desired occupancy of 84%. In this case, 4 Hour OBP stalls have an occupancy rate of 80% with no apparent need to adjust the current permit allocation. The following assessment outlines the prevalence of permits within the 2022 sampled stalls and their frequency throughout the whole parking district when extrapolated to the entire district supply. However, this district-wide approach to adjusting permit allocation may not accurately address the constraint experienced at 44% of the block faces surveyed (Figure C), where permit use could be a significant contributing factor to that constraint.

- The actual "peak occupancy" rate for all OBP stalls is 83.6% if the 104 current permits improperly using non-permitted stalls were directed to 4 Hour OBP stalls (row 2). This is only the third time OBP stalls have been below 85% since monitoring began (all instances occurring post-COVID).
- At the time of the survey, 2,429 permits were allocated to businesses in 2022. This allocation of permits to businesses is based on 80% FTE. This represents a sizable increase in the business permit distribution compared to 2021 figures (2,137), a 14% increase.
- Similarly, 3,264 permits were allocated to residents at the time of the survey; 767 more than in 2021.
- Float[36] for each category of permit continues to recalibrate based on a couple of important factors, the most significant being the continual refinement of allocation rules (eligibility, price, allocation limitations, etc.), the other is the reduction in businesses and residents opting to purchase "discretionary" permits. The float factor will continue to fluctuate somewhat as conditions within the district change (growth in dwelling units, number of businesses, long-term COVID impacts), but it will likely approach more of an equilibrium level in subsequent years[37]. Float for business permits is 407% of total permits issued, whereas residential permits have a float of 244% of permits issued. Said another way, only 18% of all business permits and 38% of all residential permits were in use during the observed combined permit peak (true peak for residential permit use occurs outside of data collection hours).
- Based on current district-wide peak hour occupancies, no additional permits would need to be reduced from current allocations to achieve desired occupancies, 84%, in OBP stalls (row 9).

[36] Float is the relationship between permits allocated and the highest number of permits present during the survey day [shown as a percentage = (permits allocated) / (peak permit use)].
[37] Residential permits had a float of 197% in both 2021 and 2020.

According to this assessment, an additional 29 could, theoretically[38], still be allocated while still achieving optimal occupancy levels.

- It is estimated that 2,104 permits would be parked in the peak hour in 2023 (row 11) versus the 2,094 permits currently shown in the extrapolated model (row 8).

Given that the recommendation (row 10) is based on a static model reflecting existing conditions and does not account for any growth in residences or employment, it is advisable to choose a target allocation goal that is less than 5,722.

Table 8: Observations of Permit Allocation

	Observation	2022	2021
1	Peak hour occupancy in 4 Hour Metered OBP stalls	79.8%	78.0%
2	Peak hour demand in 4 Hour OBP stalls if 104 permits now using non-permit stalls are allocated to OBP stalls	83.6%	81.2%
3	Permits allocated to businesses based on a 0.8 permits / FTE ratio[39]	2,429	2,137
4	Permits allocated to residents	3,264	2,497
5	Business permit "float" based on permits allocated (2,429) / and peak hour permits observed (392 observed, extrapolated to 596)	407% (2,429/596)	352% (2,137/606)
6	Residential permit "float" based on permits allocated (3,264) / and peak hour permits observed (818 observed, extrapolated to 1,337)	244% (3,264/1,337)	197% (2,497/1,266)
7	Other permits observed – Temporary, Public, etc. (29 observed, extrapolated to 45)	45	45
8	Permits displayed in peak hour @83.6% occupancy (extrapolated[40])	2,094	1,928
9	Estimated permits needed to be reduced (from 5,693) as a strategy to lower peak occupancy in 4 Hour OBP stalls from 83.6% to 84%	(29)	(158)
10	Recommendation: maximum permits allocated[41]	5,722	4,792
11	Estimated distribution of permit users in 4 Hour OBP stalls in peak hour @ 84% occupancy	2,104	1,993

[38] RWC is not recommending additional permits be allocated, merely that if 29 additional permits were allocated, the system theoretically would still maintain a (desired) sub-85% occupancy level.
[39] Many businesses elect to receive a lower ratio than the allowable 0.8 permits / FTE
[40] Figure extrapolated to the entire NW parking district (5,268 stalls).
[41] This reduction in permit allocation is intended to achieve an 84% occupancy goal – applies only to existing conditions. It does not take into account new development or growth (in residents or employment).

Table 9 illustrates the distribution of permits by type based on a recommended permit allocation of 5,700.

Table 9: Recommended Allocation Goal for Permit Types

Permit Type	Current		2023 Recommendation	
Business	2,429	43%	2,432	43%
Resident	3,264	57%	3,268	57%
Total	**5,693**	**100%**	**5,700**	**100%**

If the city were able to cap the number of allocated permits at 5,700 and distributed them based on current distribution percentages for business (43%) and residents (57%), businesses would be limited to 2,432 permits, and residents to 3,268 permits.

6.0 Goal Statements, Summary and Next Steps

Parking Goal Statements

When reviewing annual parking utilization findings, the progress metrics, hourly occupancies, and heat maps can be somewhat hypnotic – figures blur together and it's easy to forget that these numbers tell a story. They tell a story about the parking system, about how it's being used. Is it being used efficiently? And by whom? It's important to manage parking, but not to a point of diminishing returns. The parking system is there to support the community and its activities, not the other way around. The following goals statements are offered as a simple lens or point of reference to refer to when evaluating results.

NW Parking Metrics – Goal Statements

Permit allocation: *Strive to gradually reduce the total number of parking permits allocated to achieve an equilibrium, where visitor trips are not encumbered by parked residential or business permit holders during enforcement hours.*

Vehicle trips: *As a metric of economic health and vitality, maintain or increase the number of visitor trips to NW.* Parking management strategies are intended to facilitate access for prioritized user groups based on demand; it is essential to maintain or enhance access for visitor trips, which are an important economic engine to the district. In other words, do not overmanage your supply at the expense of those you are trying to encourage to come.

2 Hour stall turnover rate: *the turnover rate for 2 Hour stalls should meet or exceed 5.7 turns in a 10-hour period* (an average length of stay of 1.75 hours). This is an important metric to monitor, as 2 Hour stalls are an important tool for the retail and restaurant-based businesses in NW. These short-term stalls are intended to allow users a reasonable length of stay, while also encouraging turnover. The more stalls turnover, the more trips can be accommodated, which is particularly important in a constrained parking environment like NW.

Summary

The 2022 parking utilization study revealed a system that is, by and large, operating efficiently. Hourly occupancy levels continue their incremental strides upward, though not at the levels seen in 2019 or before. To maintain a vibrant neighborhood, it will continue to be important to ensure visitor access to the district. The ongoing implementation of parking management strategies is having a positive (though gradual) effect on the parking system. It will be important to make adjustments to the system to preserve and provide access for a variety of user groups and ensure the supply is operating as efficiently as possible.

With a few exceptions, most categories of stall types had peak hour occupancies less than 85%, including the OBP stalls. A small handful of non-conforming stall types remain scattered throughout the district, such as No Limit stalls (20) and 1 Hour Signed stalls (4).

Though occupancies for OBP stalls were below 85%, permit allocation will continue to be an important thing to monitor, particularly given the profound changes we've observed regarding working remotely in a more hybrid-style office environment.

Zone M may be too large to manage parking effectively for all areas within the NW Plan District. As stated in the report, the peak hour occupancy heat map shows 44% of block faces are constrained, but the 85% Rule approach applied zone-wide does not lead to recommended adjustments. As such, it will be important to engage stakeholders in a discussion about how to better manage the supply at a smaller, but hopefully more effective scale.

Recommendations

- Shift enforcement hours to target high occupancy periods more effectively: from 9:00 AM – 7:00 PM to 10:00 AM – 8:00 PM
- Preserve and grow the number of short-term (2 Hour) stalls to support ground floor commercial spaces and facilitate higher levels of turnover.
- Minor adjustments to stall formatting
  - ✓ Eliminate 1 Hour Signed stalls (4 of them)
  - ✓ Eliminate outlier No Limit stalls (20 of them)

7.0 Appendix A

In September 2022, RWC completed a full inventory of all on-street parking stalls in the Northwest Parking District (**Figure F**). This was a follow up to a similar inventory conducted in 2020. Comprehensive parking inventory updates are necessary to accurately monitor and track how the parking system is evolving. Considerable formatting changes often occur from one year to the next and given the dynamic nature of the development environment in NW and how it affects the adjacent on-street supply, it seems prudent to conduct regular updates. It will keep database information up to date, reflecting the most recent changes and will allow for more accurate data extrapolation, particularly in the allocation of parking permits across all of Zone M.

Figure F: Complete On-Street Parking Inventory for Entire NW Parking District

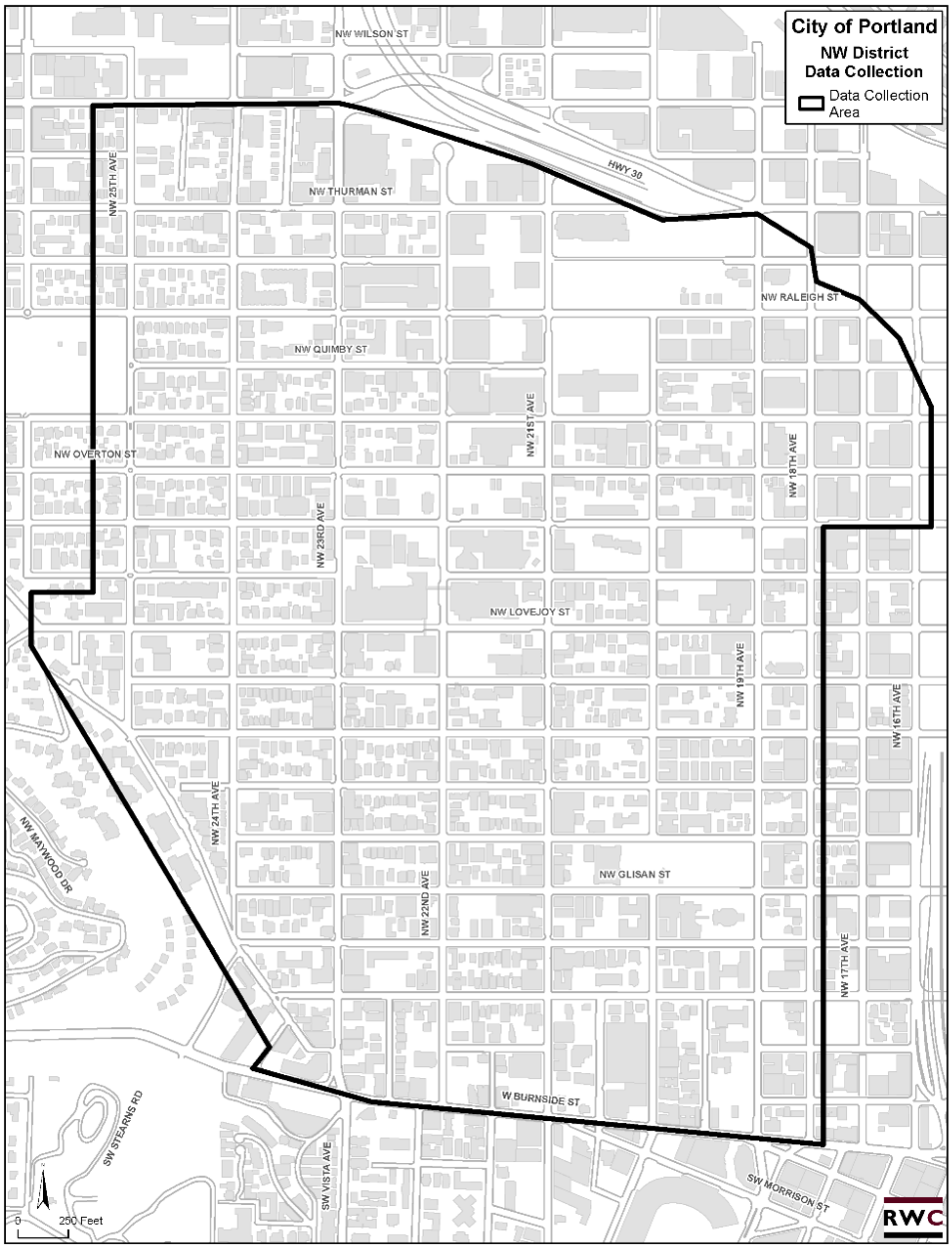


Table 10 provides a complete inventory of the on-street parking supply in the NW Parking District. The table also provides a direct comparison to the 2020 inventory. The figures from **2022** are shown in blue, whereas **2020** figures are in orange.

Table 10: Complete On-Street Parking Inventory for Entire NW Parking District (2022 vs. 2020)[42]

Stall Type	All[43]		Metered		Signed		Metered Only	Metered OBP	Signed Only	Signed OBP
	Stalls	% Total	Stalls	% Total	Stalls	% Total	Stalls	Stalls	Stalls	Stalls
On-Street Supply Studied	5,277	100.0%	5,201	98.6%	37	< 1%	882	4,319	19	18
	5,470	100.0%	5,306	97.0%	120	2.2%	971	4,335	45	75
5 Minutes	8	< 1%	-	-	8	< 1%	-	-	-	-
	14[44]	< 1%	-	-	14	< 1%	-	-	14	-
15 Minutes	9	< 1%	9	< 1%	-	-	4	5	-	-
	7	< 1%	4	< 1%	3	< 1%	4	-	3	-
30 Minutes	134	2.5%	132	2.5%	2	< 1%	132	-	2	-
	141	2.6%	137	2.5%	4	< 1%	137	-	4	-
1 Hour	9	< 1%	-	-	9	< 1%	-	-	9	-
	26	< 1%	10	< 1%	16	< 1%	10	-	16	-
2 Hours	189	3.6%	189	3.6%	-	-	189	-	-	-
	203	3.7%	195	3.6%	8	< 1%	195	-	8	-
4 Hours	4,879	92.5%	4,861	92.1%	18	< 1%	554	4,307	-	18
	5,026	91.9%	4,951	90.5%	75	1.4%	622	4,329	-	75
ADA	8	< 1%	8	< 1%	-	-	1	7	-	-
	7	< 1%	7	< 1%	-	-	1	6	-	-
No Limit	39	< 1%	-	-	-	-	-	-	-	-
	44	< 1%	-	-	-	-	-	-	-	-
ECC	2	< 1%	2	< 1%	-	-	2	-	-	-
	2	< 1%	2	< 1%	-	-	2	-	-	-

[42] 2022 stall totals are based on stall totals during the midday hour of 12:00 PM.
[43] A total of 71 stalls have been removed (not included in table) from the supply due to the more semi-permanent nature of the ubiquitous Healthy Business permits (i.e., street seats).
[44] It is possible that all 5 Minute stalls (in 2020) were mistakenly categorized as "Fast Stop" stalls, when several of them did not have the "Fast Stop" special designation.